

REMARKS

Reconsideration and allowance of the present patent application based on the foregoing amendments and following remarks are respectfully requested.

By this Amendment, the specification, the drawings and claims 1-2, 9-10 and 15-17 are amended, and claims 18 and 19 are newly added. Support for the amendments to claims 1-2, 9-10 and 15-17 and new claims 18 and 19 may be found, for example, in the embodiments shown in paragraphs [0054]-[0074] of the present application. After entry of this Amendment, claims 1-19 will remain pending in the patent application.

The drawings were objected to under 37 C.F.R. §1.83(a) as allegedly failing to show elements BD and SA as described in the specification, paragraph [0040]. In response, Applicant notes that the radiation source has mistakenly been labeled "SA" in paragraph [0040]. This appears to be a clerical mistake. As can be seen in FIG. 1, the radiation source is identified in FIG. 1 with the label "SO." Therefore, paragraph [0040] is amended to replace the label "SA" with the label "SO." With respect to element "BD," FIG. 1 is amended to include this element. A replacement sheet showing FIG. 1 with element "BD" is enclosed herewith. Accordingly, reconsideration and withdrawal of the objection to the drawings are respectfully requested.

In the Office Action, the disclosure and claim 16 were objected to by the Examiner. In response, paragraph [0007], which is identical to paragraph [0006], is deleted and claim 16 is amended to replace the term "controlling" (second occurrence) with "positioning." Support for the amendment to claim 16 may be found, for example, in the embodiment shown in paragraph [0040] of the specification. Accordingly, reconsideration and withdrawal of the objection to the disclosure and to claim 16 are respectfully requested.

Claims 1-4, 9-11, and 15-17 were rejected under 35 U.S.C. §102(a) based on Nishi *et al.* (U.S. Pub. No. 2003/0164934) (hereinafter "Nishi"). The rejection is respectfully traversed.

Claim 1 is patentable over Nishi at least because this claim recites a lithographic apparatus comprising, *inter alia*, a first transducer configured to receive and convert said electromagnetic radiation into a power signal to power at least one of a sensor, an actuator and a control unit. Nishi does not disclose, teach or suggest this feature.

Unlike the invention of claim 1, Nishi discloses a stage apparatus that includes an antenna, a converter circuit and a CPU for controlling the electrical circuit system installed in the main stage member 2. (See FIGS. 2 and 3 and paragraph [0054]). Nishi merely discloses

that the drive circuits are powered by a rechargeable battery 100 arranged in the stage apparatus. (See paragraph [0052] and FIG. 2). Nishi is, however, silent about a transducer configured to receive and convert an electromagnetic radiation into a power signal to power at least one of a sensor, an actuator and a control unit. As such, Nishi does not teach or suggest each and every element recited by claim 1 and, as a result, cannot anticipate claim 1.

Claims 2-4 are patentable over Nishi at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Claim 9 is patentable over Nishi at least for similar reasons as provided in claim 1, and for the additional features recited therein. Namely, claim 9 is patentable over Nishi at least because this claim recites a lithographic apparatus wherein, *inter alia*, the information contained in said information-bearing electromagnetic radiation is used to power at least one of a sensor, an actuator and a control unit arranged in at least a portion of the at least one of the support structure, the substrate table, the projection system, and the illumination system. Nishi does not disclose, teach or suggest this feature. As mentioned previously, Nishi merely discloses the drive circuits are powered by a rechargeable battery 100 arranged in the stage apparatus. (See paragraph [0052] and FIG. 2). As such, Nishi does not teach or suggest each and every element recited by claim 9 and, as a result, cannot anticipate claim 9.

Claims 10 and 11 are patentable over Nishi at least by virtue of their dependency from claim 9 and for the additional features recited therein.

Claim 15 is patentable over Nishi at least for similar reasons as provided in claim 1, and for the additional features recited therein. Namely, claim 15 is patentable over Nishi at least because this claim recites a device manufacturing method comprising, *inter alia*, wirelessly powering the sensor. Nishi does not disclose, teach or suggest this feature. As conceded by the Examiner on page 4 of the Office Action, Nishi is silent about a sensor. Furthermore, Applicant respectfully submits that Nishi is also silent about wirelessly powering any type of element. As mentioned previously, Nishi merely discloses that the drive circuits are powered by a rechargeable battery 100 arranged in the stage apparatus. (See paragraph [0052] and FIG. 2). As such, Nishi does not teach or suggest each and every element recited by claim 15 and, as a result, cannot anticipate claim 15.

Claim 16 is patentable over Nishi at least for similar reasons as provided in claim 1, and for the additional features recited therein. Namely, claim 16 is patentable over Nishi at least because this claim recites a device manufacturing method comprising, *inter alia*, wirelessly powering at least one of a sensor, an actuator and a control unit used in controlling at least one of said transmitting, patterning, projecting and positioning. Nishi does not

disclose, teach or suggest this feature for at least similar reasons as provided in claims 1, 9 and 15. Therefore, Nishi does not teach or suggest each and every element recited by claim 16 and, as a result, cannot anticipate claim 16.

Claim 17 is patentable over Nishi at least for similar reasons as provided in claim 1, and for the additional features recited therein. Namely, claim 17 is patentable over Nishi at least because this claim recites a lithographic apparatus comprising, *inter alia*, means for wirelessly powering at least one of a sensor, an actuator and a control unit used in controlling at least one of the illumination system, the support structure, the substrate holder and the projection system. Nishi does not disclose, teach or suggest this feature for at least similar reasons as provided in claims 1, 9, 15 and 16. Therefore, Nishi does not teach or suggest each and every element recited by claim 17 and, as a result, cannot anticipate claim 17.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-4, 9-11, and 15-17 under 35 U.S.C. §102(a) based on Nishi are respectfully requested.

Claims 16 and 17 were rejected under 35 U.S.C. §102(a) based on Ye *et al.* (U.S. Pub. No. 2003/0226951). The rejection is respectfully traversed.

Claim 16 is patentable over Ye at least because this claim recites a lithographic apparatus comprising, *inter alia*, a first transducer configured to receive and convert the electromagnetic radiation into a power signal to power at least one of a sensor, an actuator and a control unit. Ye does not disclose, teach or suggest this feature.

Ye merely discloses an image sensor unit for measuring an aerial image generated by the interaction between the photomask and the lithographic equipment. (*See* FIG. 1 and paragraphs [0016]-[0036]). However, unlike the invention of claim 1, Ye discloses that the sensor unit is powered by a battery. (*See* paragraph [0020]). Ye is silent about a first transducer configured to receive and convert the electromagnetic radiation into a power signal to power at least one of a sensor, an actuator and a control unit. Therefore, Ye does not disclose, teach or suggest each and every element recited by claim 16 and, as a result, cannot anticipate claim 16.

Claim 17 is patentable over Ye at least for similar reasons as provided in claim 16, and for the additional features recited therein. Namely, claim 17 is patentable over Ye at least because this claim recites a lithographic apparatus comprising, *inter alia*, means for wirelessly powering at least one of a sensor, an actuator and a control unit used in controlling at least one of the illumination system, the support structure, the substrate holder and the projection system. As mentioned previously, Ye does not disclose, teach or suggest this

feature. Therefore, Ye does not disclose, teach or suggest each and every element recited by claim 17 and, as a result, cannot anticipate claim 17.

Accordingly, reconsideration and withdrawal of the rejection of claims 16 and 17 under 35 U.S.C. §102(a) based on Ye are respectfully requested.

Claims 5-8 and 12-14 were rejected under 35 U.S.C. §103(a) based on Nishi in view of Ye. The rejection is respectfully traversed.

Claims 5-8 are patentable over Nishi at least by virtue of their dependency from claim 1 and for the additional feature recited therein. Namely, claims 5-8 are patentable over Nishi at least because this claim recites a lithographic apparatus comprising, *inter alia*, a first transducer configured to receive and convert said electromagnetic radiation into a power signal to power at least one of a sensor, an actuator and a control unit. Nishi does not disclose, teach or suggest this feature:

Ye fails to remedy the deficiencies of Nishi as Ye merely discloses that the sensor is powered by a battery. Therefore, any reasonable combination of Nishi and Ye cannot result, in any way, in the invention of claims 5-8. For at least this reason, claims 5-8 are patentable over Nishi, Ye and a combination thereof.

Claims 12-14 are patentable over Nishi at least by virtue of their dependency from claim 9 and for the additional feature recited therein. Namely, claims 12-14 are patentable over Nishi at least because this claim recites a lithographic apparatus wherein, *inter alia*, the information contained in the information-bearing electromagnetic radiation is used to power at least one of a sensor, an actuator and a control unit arranged in at least a portion of the at least one of the support structure, the substrate table, the projection system, and the illumination system. Nishi does not disclose, teach or suggest this feature.

Ye fails to remedy the deficiencies of Nishi as Ye merely discloses that the sensor is powered by a battery. Therefore, any reasonable combination of Nishi and Ye cannot result, in any way, in the invention of claims 12-14. For at least this reason, claims 12-14 are patentable over Nishi, Ye and a combination thereof.

Furthermore, Applicant respectfully submits that there is no motivation to combine the cited references. Nishi merely discloses that an “object of the invention is that various kinds of electrical wiring and tubes are connected to a movable stage structure body and are able to be attached or detached to the movable structure body.” (*See* paragraph [0006]). Nishi is completely silent about detecting the aerial image produced by the lithographic apparatus, as disclosed by Ye. On the other hand, Ye is silent about providing electrical wiring and tubes that are attachable to or detachable from the movable structure body as

disclosed in Nishi. As such, there is absolutely no motivation to modify one of these references in view of the other.

Accordingly, reconsideration and withdrawal of the rejection of claims 5-8 and 12-14 under 35 U.S.C. §103(a) based on Nishi in view of Ye are respectfully requested.

Claims 18 and 19 are newly added and define additional subject matter that is novel and non-obvious over the art of record. Claims 18 and 19 are patentable over the art of record at least by virtue of their dependency from claims 16 and 17, respectively. Accordingly, it is respectfully submitted that claims 18 and 19 are in condition for allowance.

All matters having been addressed and in view of the foregoing, Applicant respectfully requests entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.

Applicant's Counsel remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



E. RICO HERNANDEZ

Reg. No. 47641

Tel. No. 703.905.2088

Fax No. 703.905.2500

ERH/CFL
P.O. Box 10500
McLean, VA 22102
(703) 905-2000

Attachment: Replacement Sheet